

615 W. Markham Street Little Rock, AR 72201 Phone: 501.614.2834 Fax: 501.614.2835 www.cteh.cor

REMOVAL ACTION COMPLETION OF WORK REPORT



N-FORCER SITE 14300 HENN STREET DEARBORN, MICHIGAN

December 1, 2005

Prepared For:

CSX Transportation, Inc. Public Safety & Environment 500 Water Street, J-275 Jacksonville, FL 32202

Prepared By:

Center for Toxicology and Environmental Health, L.L.C. 615 W. Markham Street
Little Rock, AR 72201



Infrastructure, environment, buildings

Mr. Brian Kelly SE-GI USEPA Large Lakes Research Station/ORD USEPA Region 5 Emergency Response # 1 9311 Groh Road Grosse Ile, MI 48138-1697

Subject:

CSXT N-Forcer, Dearborn, Michigan, CSXT Project # R0008210 – Kevised Text of the Removal Action Completion of Work Report

Mr. Kelly:

Please find attached the revised text of the Removal Action Completion of Work Report for the CSXT N-Forcer site in Dearborn, Michigan as you requested on November 16, 2005.

If you have any questions or require additional text please contact me.

Sincerely,

ARCADIS G&M of Michigan, LLC

Terri L. Rubis Project Manager

c: Paul Kurzanski – CSX Transportation, Inc.

TRubis

Attachment

ARCADIS G&M of Michigan, LLC 25200 Telegraph Road Southfield Michigan 48034 Tel 248 350 3229 Fax 248 350 8284 www.arcadis-us.com

ENVIRONMENT

Date

December 8, 2005

Contact

Terri Rubis

Phon

248.936.8268

Email

trubis@arcadis-us.com

Our ref

SFE04044,0004

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1.0 Introduction and Purpose

1.1 Introduction

This Removal Action Completion of Work Report (CWR) was prepared by Center for Toxicology and Environmental Health, L.L.C. (CTEH), on behalf of CSX Transportation, Inc. (CSXT), and describes the removal activities undertaken at the N-Forcer site located in Dearborn, Michigan. In accordance with Unilateral Administrative Order, Docket No. VW-05-0-816, dated May 17, 2005, issued pursuant to Section 106 of CERCLA, CSXT agreed to remove soil located between the property line and Track #3, which allegedly contained amphibole material, and remove the switch and stub siding tracks. Soil measuring approximately 400 feet long x 30 feet wide x 1.5 feet deep was excavated from the property. This excavation area was suggested by the USEPA based on historical sampling, previous investigative work, and visual observations that identified trace quantities of vermiculite ore residue obtained from the WR Grace mine in Libby, Montana, present in isolated areas of the site. In some instances, trace levels Libby amphibole were identified in site soils.

1.2 Background

The CSXT property is contiguous with the N-Forcer site (site) (also known as the W.R. Grace & Company Dearborn Plant) located at 14300 Henn Street, Dearborn, Wayne County, Michigan. The N-Forcer site occupies approximately 2.7 acres and is currently improved with a single 16,000-ft² building which was used for the processing of vermiculite ore into attic insulation and lightweight concrete aggregate. The site historically consisted of a rail spur, storage silos, processing space, and furnaces.

Shipping records show that between 1966 and 1988, the site received and processed approximately 206,000 tons of vermiculite ore from Libby, Montana. Processing of vermiculite ore ceased in 1989. The storage silos and furnace were dismantled, and the rail spur is no longer used. Die, Mold & Automation Components, Inc. currently operates on the site. In the spring of 2005 a removal action was performed at the N-Forcer site by USEPA contactors. The action involved, among other things, removal of soils with Libby amphibole in excess of 1% by weight and that which would pose an inhalation hazard. Excavation of soils continued up to the property line between the CSXT property and the N-Forcer site.

USEPA expressed concerns that, since soils with visible vermiculite and/or amphiboles were observed at the property boundary, this material may extend for some distance onto the CSXT property. They also provided some evidence that a small volume of materials on the CSXT property had evidence of amphibole impact. However, sampling performed in November 2004 by ARCADIS, a contractor for CSXT, failed to identify amphibole impact in excess of the 1% action level established by the USEPA. An additional site inspection and sampling event was performed on a broader geographic area of the CSXT property on May 24, 2005, by several contractors for CSXT, including CTEH, RJ Lee Group, Inc., ARCADIS, and Olson and Associates, L.L.C. This sampling revealed that even in areas where visible vermiculite flakes were observed on the surface, microscopic examination of surface soils revealed either no detectable

amphibole or only "trace" levels. In spite of these findings, CSXT agreed to remove soils between the property line and Track #3 with visually observable amphibole fragments or materials suspected to contain such fragments, including the switch and stub siding tracks. These removal actions were conducted in July - August 2005 and are the basis for this CWR.

1.3 Previously Prepared Documents

The following plans were developed for use at the site and are summarized briefly below:

1.3.1 Health and Safety Plan

Each contractor working at the site, on behalf of CSXT, prepared a Health and Safety Plan (HASP) in accordance with the requirements of Title 29, Code of Federal Regulations (CFR) Part 1910.120 to protect onsite personnel, visitors, and the public from physical harm and exposure to potential hazardous materials during the removal activities at the site. A sample HASP was included as an appendix to the July 2005 Work Plan (Appendix A).

1.3.2 Quality Assurance Project Plan

The Quality Assurance Project Plan (QAPP), dated June 2005, outlined how samples were collected and managed (Appendix B). The QAPP was verbally approved by USEPA on June 29, 2005.

1.3.3 Work Plan

The Work Plan, dated July 2005, outlined the work methodology, procedures, and precautionary measures to be implemented for monitoring and controlling the dispersion of dust during the removal activities (Appendix A). The procedures outlined in the Work Plan were developed for the purposes of being protective of human health and the environment. Work plan modifications and field observations were coordinated with USEPA or USEPA representative. The Work Plan was verbally approved by USEPA on July 8, 2005.

1.3.4 Investigation Summary Reports

The findings from previous investigative and sampling activities at the site were presented in ARCADIS's Former W.R. Grace Asbestos Investigation dated February 8, 2005 and CTEH's Sampling Summary: May 24 – 25, 2005. Copies of these documents were additionally included as appendices to the July 2005 Work Plan (Appendix A).

1.4 Communication/Coordination

Active communication and coordination occurred between the following participants prior to initiating onsite removal activities:

- ARCADIS:
- CSX Transportation, Inc.;
- CTEH, L.L.C.;
- HBC;
- BWSC:
- Michigan Department of Environmental Quality;

- Olson and Associates, L.L.C.;
- RJ Lee Group, Inc.;
- US Environmental Protection Agency (EPA); and,
- Young's Environmental Cleanup Company, Inc.

Mobilization to the site commenced on July 22 - 24, 2005. On July 22, 2005, FRA road worker training was provided for EPA, MDEQ, Weston Solutions, Olson and Associates, L.L.C., and HBC. On July 25, 2005, asbestos awareness training was provided for Young's Environmental Cleanup Company, Inc. and ARCADIS. On July 26, 2005, the CSXT track department removed the switch from Track #3 and the portion of Track #3 contained within the excavation area. Site set-up began on July 26, 2005, and excavation began on July 27, 2005. On July 29, 2005, asbestos awareness training was provided for CSXT employees. By August 5, 2005, all removal activities were complete. On August 10 - 11, 2005, track was laid at the site. Site photographs and diagrams of the site are provided in Appendices C and D, respectively.

2.0 Removal Activities

2.1 Objective and Approach

The objective of the removal activities was to excavate, transport, and dispose of potentially-impacted soil from the site. As presented in the Work Plan, the approximate extent of excavation was tentatively identified as the area between the property line with the N-Forcer site and Track #3 (measuring approximately 400 feet x 3 feet x 1.5 feet). During removal activities, soil was excavated and backfilled with clean soil from an offsite source. The actual horizontal extent of excavation was confirmed during removal activities by visual observation of Libby amphibole. The vertical extent of excavation (1.5 feet throughout) was delineated by placement of a geomembrane prior to backfilling with clean soil.

2.2 Field Preparation

Prior to excavation, the property owners were notified on the expected extent of the removal activities and the anticipated schedule for implementation of these activities. ARCADIS notified the property owners for access across the N-Forcer property. To the extent possible, site removal activities were conducted in a manner which minimized disturbances to facility operations and no dissatisfaction or complaint was expressed by the property owner.

2.2.1 One Call System

In advance of the excavation activities, MissDig was contacted to locate buried utilities within the work area and in the adjacent areas.

2.2.2 Disposal Characterization

Proposed offsite disposal facilities were contacted and have reviewed the analytical data for the soil to be excavated at the site. For consistency, the waste management facility used previously by USEPA was selected. Final approval was obtained prior to excavation activities.

2.2.3 Permitting

A review of applicable permitting programs was conducted, and it was determined that no permits (specifically US EPA National Emission Standard for Hazardous Air Pollutants (NESHAP) were required for the excavation activities. A written access agreement for the Henn Street property was obtained by USEPA and forwarded to CSXT.

2.2.4 Training

On July 22, 2005, FRA road worker training was provided for contractors, and on July 25, 2005, asbestos awareness training was provided for contractors. On July 29, 2005, asbestos awareness training was provided for CSXT employees.

2.2.5 Previous Sampling

Sampling performed in November 2004 by ARCADIS, a contractor for CSXT, failed to identify amphibole impact in excess of the 1% action level established by the USEPA. An additional site inspection and sampling event was performed on a broader geographic area of the CSXT property on May 24, 2005, by several contractors for CSXT, including CTEH, RJ Lee Group, ARCADIS, and Olson and Associates, L.L.C. This sampling revealed that even in areas where visible vermiculite flakes were observed on the surface, microscopic examination of surface soils revealed either no detectable amphibole or only "trace" levels.

2.3 Mobilization and Site Setup

Upon mobilization on July 26, 2005, the site was delineated into work areas based upon the anticipated work activities. The site was equipped with field equipment, including the necessary health and safety equipment and air monitoring equipment. Emergency contact information was posted in the event of an emergency. Water was staged onsite in tanks for use with dust control measures.

To deter access by the general public, the limits of the excavation area were delineated with orange snow fencing and warning signs prior to commencing excavation activities. Asbestos warning signs were posted along the perimeter of the work zone.

Work zones were established and delineated in the field as described in the Work Plan and HASPs. Additionally, air monitoring stations were established east and west of the excavation area.

2.3.1 Silt Fence

Silt fencing was installed, to minimize the transport of sediment following periods of heavy rainfall. The silt fence toe was embedded approximately 4 to 6-inches into the ground and was anchored to prevent flow underneath the fence. The silt fence was supported by wooden stakes driven into the ground. The fence was placed on the ground, along the interior perimeter of the north, south, and west boundaries of the work zone. The silt fence was left in place at the conclusion of the removal activities and will be maintained until grass seeding can adequately control erosion at the site. No rain event sufficient to result in water runoff from the excavation area occurred during this project.

2.3.2 Dust Control

Dust management controls were implemented as needed during removal activities and consisted of dust suppression watering or misting using a pressurized water truck with an adjustable nozzle. During the interim when the water truck was being refilled, a handheld garden sprayer was used to mist the soil. Water was applied to both the steel plates and the ground to prevent the airborne disbursal of dust as the steel plates were moved from one location to another.

2.4 Soil Excavation Activities

2.4.1 Sequence and Method of Excavation

The soil removal activities commenced on July 27, 2005 after the installation and setup activities of engineering controls and support system were completed.

Excavation activities were conducted in a manner to limit the contact of equipment and personnel with potentially-impacted soils. A hydraulic excavator equipped with a power tilt bucket was used to carefully strip soil for placement into a plastic lined roll-off container. The power tilt bucket allowed excavation to progress in a defined manner allowing the operator to be able to control the depth of the excavation on uneven surfaces. The excavator was decontaminated after contact with site soils. During excavation activities, water spray was used to control visible dust.

Soils were visually and physically inspected prior to direct placement into lined roll-off containers. Roll-off containers were placed on clean steel plates within reach of the excavator. The steel plates minimized direct contact between the roll-off containers and soil in the work area. Polyethylene sheeting was draped from the roll-off containers to the edge of the clean geotextile fabric, overlapping into the impacted excavation area. This sheeting served to capture any inadvertent overflow from the excavator bucket during loading. Upon completion of the roll-off loading, the polyethylene sheeting was carefully pulled back, the roll-off container liner sealed, and the tarp and bow system with bow supports secured in place. Truck wheels were washed prior to exiting the loading area.

A decontamination station consisting of a three tub wash system and a clean trailer section was established to remove potentially impacted soil from equipment and personnel departing the work area.

Excavation was required at and around the existing onsite railroad bed, including the switch at Track #3. The railroad spur was removed in sections to allow for excavation beneath the railway. Track protection was provided by CSXT's Track Department, which included locking out a south end switch and installing a north end derailing device on Track #3 and providing flag protection on Track #2, which was located within 25 feet of Track #3.

Following rain events, the ground surface became too soft to support equipment traffic so steel plates were placed on the geotextile fabric to prevent rutting or damage by the equipment to the geotextile.

Excavation boundaries were surveyed using a Trimble Geo XT global positioning system unit to document the extent of the excavation activities. The corner boundary coordinates for the excavation area are N 42.33924°, W 83.18305°; N 42.33919°, W 83.18298°; N 42.33863°, W 83.18225°; N 42.33845°, W 83.18201°; N 42.33849°, W 83.18195°; N 42.33861°, W 83.18210°; N 42.33921°, W 83.18290°; and N 42.33927°, W 83.18300°.

At the conclusion of each work day and prior to departure, exposed areas that were disturbed were protected and secured by first watering exposed soils and then covering with plastic sheeting as approved by EPA. Roll-off containers were covered at the conclusion of each work day and labeled with red asbestos barrier warning tape and asbestos warning signs.

As detailed in the HASP, the personal protective equipment (PPE) required in the "Hot Zone" was initially level C, which included a half-face or full-face respirator fitted with a filter cartridge suitable for asbestos, steel-toed safety boots, rubber boot coverings, latex gloves, hard hat, safety glasses with side shields, and Tyvek or equivalent suit, over which an orange vest was worn. The requirements for respiratory protection were evaluated using the results from the first day of perimeter and personal air sampling. Sampling from the first day of excavation indicated air concentrations below the OSHA Permissible Exposure Limit (PEL), with no amphibole fibers detected in any sample; therefore, the use of respiratory protection was at the discretion of the individual employee for the duration of work within the "Hot Zone".

2.4.2 Soil Inspection and Characterization

Inspection of the excavated areas performed by RJ Lee Group, Inc. identified three locations potentially impacted with Libby amphibole. Two of the areas measured approximately 2 feet x 4 feet and were located at the south end of the site along the western property boundary. The third area measured approximately 2 feet x 6 feet and was located at the northwest end of the excavation pit. Bulk sampling was conducted which confirmed the presence of amphibole tremolite-actinolite.

Bulk sampling was performed in three areas with identified vermiculite contamination. Grab samples were analyzed by RJ Lee Group, Inc. using both EPA/600/R-93/116, a polarized light microscopy (PLM) procedure, and New York ELAP 198.4, a transmission electron microscopy (TEM) analytical procedure. Bulk sample results confirmed on-site observations of visible vermiculite. Amphibole tremolite-actinolite was observed in each of the samples. Some cleavage fragment tremolite-actinolite was also observed. Sampling locations are shown in Appendix D. Locations where soil samples were collected for visual inspection are labeled

"SS..." and locations where samples were collected for analysis are labeled "NFMI...." Laboratory documentation is provided in Appendix E.

2.4.3 Extent of Excavation

The extent of the excavation included the approximately 30 feet of grass area between the northeast N-Forcer property boundary to Track #3 and extended the length of the N-Forcer property, approximately 400 feet. The excavation progressed to a visually estimated depth of approximately 1.5 feet below ground surface (bgs). During the excavation, visually impacted soil was not detected at the excavation boundaries. This was confirmed by test pitting which was conducted in accordance with the EPA.

The extent of the excavation comprised an approximate area of 12,000 feet² and is presented on Figure 1, which is included in Appendix D. A total weight of 940 tons of soil was removed for disposal from the site during removal activities.

2.5 Transportation and Disposal

All state and federal requirements for offsite transportation and disposal of excavated soils were met, including the requirements that apply to manifests, bills of lading, and other shipping papers. In addition, shipping containers and transport vehicles were labeled and placarded in accordance with applicable requirements, including the U.S. Department of Transportation (DOT) regulations set forth at Title 49 of the Code of Federal Regulations.

Roll-off containers were inspected upon delivery to the site to ensure that they were clean and free of debris, weatherproof and secure. The tarp and box system were inspected for tears and rips that may allow storm water infiltration.

Impacted soil material was transported under manifest to the Sauk Trail Hills Development facility located at 5011 South Lilley, Canton, Michigan 48188. Shipping documentation was prepared prior to transporting soil from the site. Copies of all transportation and disposal manifests are presented in Appendix F. Wastes generated at the site during removal activities are summarized in Table 1, which is located in Appendix G.

2.6 Air Monitoring and Sampling

Perimeter, work area, and personal air monitoring continued throughout the removal activities at the site and were conducted in accordance with the Work Plan and HASP. Monitoring summaries are included in Appendices H - I. Air monitoring results showed no amphibole fiber in any sample, documenting exposures below applicable action levels. Particulate monitoring results showed elevated particulate levels during sand backfill deliveries and during initial excavation activities. However, elevated particulate levels were ameliorated with dust suppression methods.

Air monitoring instruments were calibrated daily and operated in accordance with the manufacturer's recommendations. Analytical air sampling for Libby amphibole was performed using SKC air sampling pumps and 0.8µm or 0.45µm cellulose membrane cassettes, connected with Tygon tubing. Due to a delayed flight, 0.45µm cassettes were not available for use on the first day of activities which resulted in the use of the 0.8µm cassettes for initial sampling. The 0.45µm cassettes arrived on the second day of activities and were used exclusively for the duration of the activities.

Air samples were collected and analyzed in accordance with the Work Plan. Airborne fibers were counted using an optical phase contrast microscope (PCM) per NIOSH 7400. This method counts all fibers that are at least 5 microns in length and have a minimum 3:1 aspect (length to width) ratio. It accurately assesses fiber exposure levels, but cannot differentiate between Libby amphibole and other types of fibers. Therefore, samples with fibers detected using PCM were further analyzed using NIOSH 7402. NIOSH 7402 uses transmission Electron Microscopy (TEM) methods to count and identify fiber types, including Libby amphibole structures (including fibers, fiber bundles, clusters and matrices). This includes fibers both greater than and less than 5 microns in length and structures too thin to be optically detected by PCM (Wellings, 1999).

Particulate air monitoring was performed using both a DUSTTRAK™ Aerosol Monitor Model 8520 and a SidePak™ Aerosol Monitor Model AM510. These instruments use a light scattering photometer that incorporates a pulsed, high output, near-infrared light emitting diode source, a silicone detector/hybrid preamplifier, controlling optics, and a source reference feedback PIN silicone detector. The intensity of the light scattered over the forward angle of 45° to 90° by the airborne particles passing through the sensing chamber is linearly proportional to their concentration. The optical configuration produces optimal volume response to particles ranging in size from 0.1 to 10 microns. Visible emissions observed during the excavation activities were immediately addressed.

2.6.1 Monitoring Frequency and Locations

Prior to initiating removal activities at the site, fixed monitoring stations were established. The locations of the monitoring stations were positioned so that the perimeter air monitoring encompassed the work area. Stations were selected based on sensitive receptors, current excavation area, and wind direction and were placed west and east of the work zone. In addition to stationary monitoring, personnel monitoring for Libby amphibole was also performed, and results were provided to personnel sampled.

2.6.2 Meteorological Monitoring

Meteorological data was collected with a WeatherPak®-2000 in an effort to understand air movement at the site. The WeatherPak®-2000 continuously measures wind speed, wind direction, ambient temperature, solar radiation, humidity, U component, V component, sigma theta, horizontal stability, vertical stability, scalar wind speed, scalar wind direction, and sigma wind speed. The weather station was located at N 42.33852°, W 83.18277°. Meteorological data are included in Appendix I.

2.6.3 Aggressive Air Monitoring

During initial soil excavation, an aggressive air monitoring survey was conducted to establish potential airborne dust and fiber levels experienced during excavation and track laying activities. Results from the aggressive air monitoring represent a worst case dust condition created to analyze potential dust and amphibole levels. Air monitoring was performed while using a gas-powered leaf blower along the disturbed and exposed track bed. The leaf blower was used to generate airborne dusts from along the track surface. Monitoring results from this event were below acceptable OSHA exposure limits. In fact, no asbestos fibers were detected in the air samples obtained during this monitoring. Monitoring results are summarized in Appendix H, and laboratory documentation is provided in Appendix E.

2.7 Backfilling and Restoration

Upon completion of the removal activities, a geomembrane layer was placed over the entire excavation area. Clean fill material (sand and soil) from an offsite source were compacted in layers on the geomembrane and the surface regraded to match preexcavation grade. Following completion of backfilling and upon receipt of EPA approval, the area was seeded to protect against soil erosion and to restore the site to its pre-removal condition. Clean crushed gravel was placed to reballast the tracks within the removal area.

2.8 Track Repair

On July 26, 2005, the CSXT track department removed the switch from Track #3 and the portion of Track #3 contained within the excavation area. Upon completion of the removal activities, the portion of Track #3 that was removed was repaired by CSXT personnel. Repair activities included placement of clean railroad ties and track in the affected area. All workers received asbestos awareness training and information about site conditions prior to performing the work. CTEH personnel performed area and personnel monitoring during these activities. No amphibole fibers were detected in any sample. Results of this monitoring can be found in Appendix H.

3.0 Project Documentation and Demobilization

At the conclusion of removal activities at the site, the site was inspected by the site Manager and representatives for the EPA. Similar inspections were performed by the adjacent property owner (NForcer), and the owner of the N-Forcer property was satisfied with the restoration. Materials were removed from the site and equipment and personnel were demobilized from the site. Excavation activities were documented on a daily basis by field personnel utilizing field log books and photo documentation. Photographs and monitoring data collected and recorded during the removal activities are summarized in Appendices C - I.

4.0 Regulatory Oversight

Site activities were performed in accordance with Unilateral Administrative Order, Docket No. VW-05-0-816, dated May 17, 2005, issued pursuant to Section 106 of CERCLA. Site activities were also performed as outlined in the EPA-approved QAPP and Work Plan. Prior to work activities, Mr. Keith Langworthy, Michigan Department of Labor and Economic Growth, and Mr. Tom Vincent, Michigan DEQ, were notified and provided scope of work. Mr. Vincent confirmed that NESHAP notification was not required. Mr.

Ken McRowe (Weston Solutions) acted as the on-site EPA representative and remained on site during all excavation activities. Mr. Ted Lamarre (Weston Solutions) and Brian Kelly (EPA) visited the site on multiple occasions and were updated on site progress by Mr. McRowe and CSXT contractors. At the conclusion of removal activities at the site, the site was inspected by the site Manager and representatives for the EPA, and Brian Kelly approved the excavation extent and completion.

5.0 Good Faith Estimate of Costs Incurred

Per the Work Plan and the request of MDEQ, a good faith estimate of the costs incurred at the site to conduct the above-described removal activities is approximately \$324,558.

6.0 Certification

Center for Toxicology and Environmental Health, L.L.C., on behalf of CSX Transportation, Inc. is submitting this Removal Action Completion of Work Report describing the removal activities undertaken at the N-Forcer site located in Dearborn, Michigan. This certification relies upon the accuracy of the information and documentation provided by several contractors and consultants that performed work related to the removal activities at the site. This certification comprises a declaration of professional judgment. It does not constitute a warranty or guarantee, express or implied, nor does it release any other party of its responsibilities to abide by contract documents or applicable codes, standards, regulations, or ordinances.

"Under penalty of law, I certify that, to the best of my knowledge, after appropriate inquires of all relevant persons involved in the preparation of this report, the information submitted is true, accurate, and complete."

Dr. Phillip Goad

Partner and Senior Toxicologist

Center for Toxicology and Environmental Health, L.L.C.